

Serial No. 10/575,789
Amdt. dated October 12, 2010
Reply to Office Action of July 12, 2010

Docket No. HI-0272

Amendments to the Specification:

Please replace the paragraph on page 5, lines 31-32 with the following amended paragraph:

Since the door is not clouded, the user can easily ~~object~~ observe the cooking state of the food.

Please replace the paragraphs on page 7, lines 5-18 with the following amended paragraphs:

That is, the outer case 110 functions to define the outer appearance of the microwave oven and to protect the cavity 130 installed ~~the rein~~ therein. Accordingly, it is preferable that the outer case 110 is formed of a steel plate having predetermined strength.

The outer case 110 is installed around the cavity 130, including an upper cover 111 covering the top and both sides of the cavity 130, a base cover 114 covering a bottom of the cavity 130, a front cover 112 defining a front portion of the cavity 130, and a back cover 113 protecting a rear portion of the cavity 130. The door 120 is mounted on the front portion of the front cover 112. Provided on a side portion of the door 120 is a control panel 170 for inputting operation conditions of the microwave oven 100.

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Please replace the paragraph on page 7, lines 24-32 with the following amended paragraph:

The cavity 130 is defined by assembling top, left, right (see FIG. 2), bottom, and rear plates 181, 183, 184, 182, and 185. A waveguide for direction microwave generated by a magnetron into the cavity 130 is mounted on an outer circumference of the upper plate 181. A ~~synchronous motor~~ synchronous motor 160 for driving a stirrer fan is mounted on a side of the waveguide 150. The stirrer fan is mounted between the upper plate 181 and the upper duct 200 (see FIG. 2) mounted under the upper plate 181.

Please replace the paragraph on page 8, lines 6-11 with the following amended paragraph:

Disposed in the electric component chamber ~~30~~ 140 are a magnetron 146 for generating the microwave, a transformer 142 boosting voltage and applying the same to the magnetron 146, a blower fan 144 for cooling down electric components heated during the generation of the microwave, and a capacitor 141 charging electric charges being applied to the transformer.

Please replace the paragraphs on page 9, line 11-page 10, line 8 with the following amended paragraphs:

That is, the upper duct 200 includes a rectangular main body 210 and an inclined portion formed at a front portion of the main body 210 and inclined upward at a predetermined angle.

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The upper duct 200 further includes one or more air exhaust holes 211 formed on a rear portion of the main body 210 to exhaust high temperature air to an external side, one or more longitudinal air blowing holes 421-221, and grasping holes 260 through which the user can grasp to mount and dismount the upper duct 200.

The upper duct 200 further includes air-guide holes 230 formed between the main body 210 and the inclined portion 220 to direct air from the external side into the cavity 130 and air-guides 240 for directing air rearward in the cavity 130.

In addition, the cavity 130 is provided at a right wall with an air intake hole (not shown) through which air can be directed from the electric component chamber 130 140 toward the cavity 130. The cavity 130 is provided at a top with one or more air exhaust-hole holes (not shown) corresponding to the air exhaust-hole holes 211 so that the air exhausted through the air exhaust-hole holes 211 can be exhausted out of the cavity 130.

The air introduced through the air intake hole of the cavity 130 is directed to a space defined between the upper plate 181 and the upper duct 200. Accordingly, the air introduced through the air intake hole of the cavity 130 is guided by the upper duct 100 200 and then directed into the cavity 130 by a stirrer fan (not shown) disposed between the top of the cavity 130 and the upper duct 200.

The main body 210 is provided at a rear end with one or more fixing projections 270 and the inclined portion 220 is provided at a front end with a hook step 250. The exhaust holes 211 is

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inclined at a predetermined angle to prevent the air exhausted through the ~~exhaust-hole holes~~ 211 from flowing backward.

Please replace the paragraphs on page 10, lines 16-33 with the following amended paragraphs:

The grasping holes ~~160~~ 260 formed between the blowing holes 221 are provided to make it easy to mount or dismount the upper duct 100. Preferably, the grasping holes ~~160~~ 260 are formed on left and right portions of the inclined portion 220. The air-guide holes 230 are arranged from a left end of the upper duct 200 to a right end of the upper duct 200. Each of the air-guide holes 230 is formed in a rectangular shape to vertically penetrate the upper duct 200. The air-guides ~~230~~ 240 are formed around the respective guide holes 230 so as to guide the direction of the air directed from the air-guide holes 230.

Meanwhile, the stirrer fan installed between the upper duct 200 and the top of the cavity 130 functions to scatter the microwave radiated into the cavity 130. Hence, the scattered microwave is directed into the cavity 130 after permeating the upper duct ~~100~~ 200. In order to allow the microwave to permeate the upper duct ~~100~~ 200, the upper duct 200 is preferably formed of synthetic resin.

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Please replace the paragraph on page 11, lines 6-18 with the following amended paragraph:

As described above, the air intake holes are formed on the right wall of the cavity 130 to direct the air from the electric component chamber 140 to the space defined between the top of the cavity 130 and the upper duct 200. The air directed into the space flows toward the front portion of the upper duct 200 by the stirrer fan. A portion of the air directed to the front portion of the upper duct is directed to the door side through the blowing holes 221 of the upper duct 200, and the rest is directed downward through the air-guide holes 230. At this point, the air directed through the air-guide holes 230 is deflected toward the rear portion of the cavity 130 at a predetermined angle by the shape of the air-guides 250 240.

Please replace the paragraphs on page 11, line 28-page 12, line 7 with the following amended paragraphs:

As described above, the fixing projections 270 are formed on the both sides of the rear end of the main body 210 and the hook steps 250 are formed on the front end of the inclined portion 220. Rear fixing holes for receiving the fixing projections 270 are formed on the back rear plate 185 of the cavity 130. Front fixing holes for receiving the hook steps 250 are formed on the front cover 112 of the cavity 130.

Accordingly, in order for the user to mount the upper duct 200 on the top of the cavity 130, the user grasps the grasping holes 260 such that the fixing projections 270 ~~is~~ are oriented

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rearward and inserts the upper duct 200 into the cavity 130. Then, when the user inserts the fixing projections 270 into the rear fixing holes formed on the ~~back~~ rear plate 185 of the cavity 130, the rear side of the upper duct 200 is fixed on the rear portion of the cavity 130.

Please replace the paragraph on page 12, lines 11-14 with the following amended paragraph:

As described above, when the upper duct ~~100~~ 200 is fixed on the front cover 112, the upper duct 200 is easily fixed on the top of the cavity 130 without any special coupling members such as screws.

Please replace the paragraphs on page 12, line 19-page 13, line 4 with the following amended paragraphs:

That is, in a state where the upper duct 200 is installed on the top of the cavity 130, the grasping holes 260 are oriented frontward. That is, when the user opens the door 120, the grasping holes 260 ~~is~~ are exposed frontward. In this state, the user inserts his/her fingers into the grasping holes 260, pushes the upper duct 200 rearward, and further pushes the upper duct 200 downward to remove the hook steps 250 from the front fixing holes. In this state, when the user pulls the upper duct 200 frontward, the fixing projections 270 are removed from the rear fixing holes, thereby dismounting the upper duct 200 from the top of the cavity 130.

As described above, the dismounting of the upper duct 200 is realized in a reverse process to that for the mounting the upper duct 200. That is, in the dismounting process, the hook steps 250 are first removed and then the fixing projections 270 are removed. In the mounting process, the fixing projections 270 are first inserted and then the hook steps 250 are inserted.

FIG. 4 is a perspective view illustrating the air-guide portion of the upper duct 200.

Please replace the paragraphs on page 13, line 8-24 with the following amended paragraphs:

The air-guide holes 230 are formed penetrating the main body 210 of the upper duct 200 in a rectangular shape. The air-guides 230 240 are formed around the respective air-guide holes 230.

Meanwhile, the air-guides 240 are formed extending from the main body 210 downward and having a \square -shaped section. Describing in more detail, each of the air-guides 240 includes an inclined rib 242 extending downward from the main body 210 to a predetermined height and a bent rib 241 bent from both ends of the inclined rib 242 rearward of the upper duct 200. The inclined rib 242 and the bent rib 241 are integrally formed with each other. The inclined rib 241 242 is inclined rearward at a predetermined angle with reference to a vertical surface perpendicular to the main body 210. Hence, the air directed through the air-guide holes 230 are directed rearward of the cavity 130 by the inclined angle of the inclined ribs 242.